

REMARKS

Claims 1-13 have been canceled and new claim 14 has been added and remains the only claim pending in the application.

Specification

The specification has been amended to insert the cross-reference to related application as required by the Examiner.

Drawings

The Examiner has stated that Figs. 2, 3, 4 and 5 should be designated as prior art. Reconsideration and withdrawal of this requirement is requested since Figs. 2-5 are not prior art but relate to the present invention.

On page 5, line 8 of the specification, it states that "A first embodiment of the present invention will be described below with reference to Figs. 1 to 9." In the description of Figs. 1-9 which follows in the specification, it is clear that Figs 2-9 relate to the first embodiment of the invention and therefore do not need to be labeled as prior art.

Claim Rejections under 35 USC § 101

Claim 7 stands rejected under 35 USC 101 because the claim allegedly is drawn to an abstract idea in that it merely recites designing steps and therefore is directed to non-statutory subject matter.

Claim 7 has been canceled and replaced with new claim 14 wherein a process of manufacturing a gas turbine is clearly set forth in various steps for designing and constructing a gas turbine. It is therefore submitted that claim 14 meets all of the requirements of 35 USC § 101.

Claim Rejections under 35 USC § 102

Claim 7 stands rejected under 35 USC 102(b) as being anticipated by Walker et al. U.S. Patent 5,520,512.

As previously noted, claim 7 has been canceled and new claim 14 has been added which is the only claim pending in the application. For the reasons set forth hereafter, it is submitted that new claim 14 is patentable.

Patentability of Claim 14

New claim 14 is directed to a process of manufacturing a gas turbine having a compressor, combustor and turbine which are each constructed of a plurality of elements designed according to necessary parameters. The process comprises the steps of: 1) setting values of the parameters of elements which are used in common in various power generation cycles, from among the plurality of elements of the gas turbine and constructing the common elements based on the set values of the

parameters, and 2) setting a value of at least one of a combustion temperature and a pressure ratio utilized in design of the common elements different from values of the combustion and the pressure ratio and the desired power generation cycle of the gas turbine to be manufactured and constructing the gas turbine using the designed common elements which are adapted for a power generation cycle of the gas turbine manufactured.

With the present invention, it is possible to manufacture a gas turbine having high power generation efficiency in each of a simple cycle, a combined cycle, and a high-moisture gas turbine cycle. The invention makes it possible to decrease the production cost of the gas turbine and shorten a time required for manufacture thereof.

Walker et al., discloses a process of making gas turbines, wherein the hardware components of the second and third stages are common parts between 60 and 50 Hz gas turbines, and hardware components of the first and fourth stages are different parts.

Thus, in Walker et al., when modifying gas turbine from a 60 Hz turbine to a 50 Hz turbine, mass flow is increased by increasing the height of the exit annulus, and the first stage nozzles and area of the buckets are changed such that a turbine pressure ratio is maintained while accommodating increased mass flow. Please refer to column 2, lines 37-64 in Walker et al.

In other words, Walker et al. maintains a constant combustion temperature or pressure ratio between the 60 and 50 Hz turbines, and does not consider power generation efficiency of the gas turbines. Walker et al., enables use of certain

common hardware components in turbines operated at different frequencies. As a result, power generation efficiency is sacrificed. Accordingly, Walker et al., is fundamentally different in technology from the present invention as now claimed.

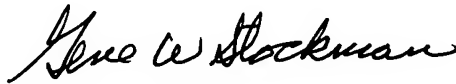
Walker et al., does not disclose the important feature in Applicant's invention as now claimed of a "setting value of at least one of a combustion temperature and a pressure ratio utilized in design of the common elements different from values of the combustion temperature and the pressure ratio in the desired power generation cycle of the gas turbine to be manufactured". To the contrary, Walker et al., teaches that the combustion temperature should be maintained constant, which is technically much different from the present invention. New claim 14 is therefore patentable.

CONCLUSION

In view of the foregoing amendments and remarks, the Applicants request reconsideration of the rejection and allowance of claim 14.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. KAS-182-02).

Respectfully submitted,



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